No. 200500141

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Rutgers, The State University of New Jersey

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

FESCUE, HARD

'Lucy'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of Washington, D.C. this thirtieth day of January, in the year two thousand and eight.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER: ~~Dr. William Meyer~~ Rutgers, The State University of New Jersey ~~c/o Rutgers University~~ (BT: 8/4/2006)

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME: HOE

3. VARIETY NAME: Lucy (BT: 11/19/2007)

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*:
Foran Hall
Plant Biology & Pathology
59 Dudley Road
New Brusnwick, NJ
08901

5. TELEPHONE *(Include area code)*: 732 -932 -9711 *ext. 160*

6. FAX *(Include area code)*: 732 - 932 - 9441

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PVPO NUMBER: 200500141

FILING DATE: February 18, 2005

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*: Government Institution

8. IF INCORPORATED, GIVE STATE OF INCORPORATION:

9. DATE OF INCORPORATION:

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers.)*
Dr. William Meyer
c/o Rutgers University
Plant Biology & Pathology Dept.
59 Dudley Road
New Brunswick, New Jersey
08901

FEES RECEIVED

FILING AND EXAMINATION FEES: $ 3652.00 DATE 2/18/2005

CERTIFICATION FEE: $ 768.00 DATE 10/5/2007

11. TELEPHONE *(Include area code)*: 732 - 932 - 9711 Ext. 160

12. FAX *(Include area code)*: 732 - 932 - 9441

13. E-MAIL:

14. CROP KIND *(Common Name)*: Hard Fescue

15. GENUS AND SPECIES NAME OF CROP: *Festuca longifolia*

16. FAMILY NAME *(Botanical)*: *Poaceae*

17. IS THE VARIETY A FIRST GENERATION HYBRID? ☐ YES ☒ NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. ☒ Exhibit A. Origin and Breeding History of the Variety
b. ☒ Exhibit B. Statement of Distinctness
c. ☒ Exhibit C. Objective Description of Variety
d. ☒ Exhibit D. Additional Description of the Variety *(Optional)*
e. ☒ Exhibit E. Statement of the Basis of the Owner's Ownership
f. ☒ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. ☒ Filing and Examination Fee ($2,705), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☐ YES *(if "yes", answer items 20 and 21 below)* ☒ NO *(if "no", go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO THE NUMBER OF CLASSES? ☐ YES ☐ NO
IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES? ☐ YES ☒ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*? ☐ YES ☒ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety will be furnished with applicaiton and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER	SIGNATURE OF OWNER
NAME *(Please print or type)*: Rutgers University	NAME *(Please print or type)*: Pennington Seed, Inc.
CAPACITY OR TITLE: Acting Executive Dean	CAPACITY OR TITLE: Exec. V.P.
DATE: 11/10/5	DATE: 1/21/05

S&T-470 (07-01) designed by the Plant Variety Protection Office with WordPerfect 9.0 Replaces STD-470 (04-01) which is obsolete. *(See reverse for instructions and information collection burden statement.)*

Exhibit A:

Origin and Breeding History
'Lucy'
<HOE>Hard Fescue
(BT:11/19/2007)

'Lucy'
<HOE>Hard fescue (*Festuca longifolia* Thuill.) is an advanced generation synthetic cultivar (BT:11/19/2007) selected from the maternal progenies of 61 clones. HOE was developed for improved seed yield and turf performance, dark bright green color, freedom from disease and medium-early maturity. Thirty-five percent of the parental germplasm in HOE contain endophyte (Epichloe festucae [Chardl]). Approximately thirty-three percent of the parental germplasm trace to plants selected from or related to the cultivar Waldina. Approximately 25 percent trace to plants selected from or related to the cultivar Scaldis. The other 58 percent trace to selections from old low maintenance turfs of the eastern US.

The breeding method used in the development of HOE Hard fescue was a population improvement program involving the evaluation of collected germplasm followed by cycles of recurrent phenotypic and genotypic selection. The population improvement program was initiated in 1968 at Rutgers University to improve pest resistance, stress tolerance, attractiveness, turf performance, seed yield and the ability to provide an acceptable turf cover without the need for supplemental fertilization or irrigation. The breeding program included extensive germplasm collection and evaluation of the most promising genetic material from old turfs. Most of the promising selections were made in old cemeteries in northern and central NJ; Atlanta, GA and Baltimore, MD; golf course roughs in NJ and NY and lawns of Cook, Douglas and Rutgers Colleges of Rutgers University, New Brunswick, NJ. The breeding program also included: intercrossing the most attractive plants, screening their progenies (over 50,000) for resistance to powdery mildew (*Erysiphe graminis* DC), leaf spot (*Dreschlera dictyoides* Shoemaker) and an attractive turf-type growth habit under greenhouse conditions, evaluating these selected seedlings (over 12,000 individuals) in isolated spaced-plant field nurseries at either Adelphia or North Brunswick, NJ, removing the least attractive plants from these nurseries prior to anthesis, harvesting seed from the most attractive pest resistant plants with the best floret fertility, seeding over 1,000 single-plant progenies in closely mowed turf trials, selecting attractive plants from the best performing progenies

which contained endophyte, and repeating the above procedures in a continuing population improvement program to produce ~~HOE~~ Lucy (11/19/2007 bc) hard fescue.

Following varying cycles of phenotypic and genotypic selection for characteristics such as dark green color, high shoot density, early seed maturity and freedom from disease, a turf trial was established in the fall of 1994 containing 70 single plot progenies. Following five years of plant competition, mowing and environmental stresses such as drought and disease, the five best performing turf plots from the 1994 turf trial were selected. A nursery was established in the spring of 1999, which contained 360 plants from the progeny of those five clones from the 1994 turf trial. During the spring of 2000, sixty-three plants were chosen from this nursery for dark bright green color, high shoot density, early seed maturity and freedom from disease. These selected plants were moved, prior to anthesis, to an isolated crossing block at Adelphia, NJ. Sixty-one plants from five different maternal lines were harvested with excellent floret fertility and freedom from disease. In the fall of 2000, one turf plot of each line was established at Adelphia. After one year of plant competition and exposure to environmental stresses the best 23 performing turf plots were selected and tillers were sent to Advanta Seed Pacific for increase. The twenty-three lines were harvested in bulk and designated HOE, breeder seed. Breeder seed was used to establish a morphological nursery for Plant Variety Protection (PVP) measurements in the fall of 2002.

2. Breeder Seed Maintenance:

A breeder seed multiplication was planted in isolation in 2001 in Albany, Oregon. Seed was harvested in bulk in 2002 and is maintained in cold storage. Seed propagation is limited to three generations, one each of foundation, registered, and certified.

3. Stability and Uniformity:

Lucy
<HOE> has been a stable uniform cultivar over 2 generations. No off-type or variant plants (11/19/2007)
have been observed during the multiplication or reproduction. During the breeder seed multiplication 1.26 % of the plants were removed. The plants that were removed showed less vigor and had poor plant health. It is not known if the lack of vigor was due to environmental factors. genetic factors, or an environmental by genetic interaction. These types were not observed during the subsequent generations. Turf plots of HOE have been uniform and stable.
(BT: 8/17/2007)

Exhibit B:

Novelty Statement of Lucy <HOE> (ST: 11/19/2007) Hard Fescue

The following summary outlines the distinctive characteristics of HOE. The novelty of HOE is based on the unique combination of these characteristics. HOE is most similar to Scaldis, but may be differentiated by using the following criteria:

1) Lucy <HOE> (11/19/2007 ST) has a mature plant height at least 128 mm shorter than Scaldis (tables 1A, 1B).

2) The panicle length of HOE is at least 120 mm shorter than Scaldis (tables 1A, 1B).

3) The flag leaf characteristics; length, height, and sheath length are all shorter for HOE compared to Scaldis (tables 1A, 1B).

4) HOE has a shorter lemma awn length compared to Scaldis (tables 2A, 2B).

5) The distance between the two most lower whorls is less for HOE than Scaldis (tables 2A, 2B).

6) The length of the panicle from the lower most whorl to the apex is shorter for Lucy <HOE> (11/19/2007 ST) compared to Scaldis (tables 2A, 2B, illus. 1).

FORM APPROVED: OMB NO. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURE MARKETING SERVICE
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Fine Leaved Fescues)

OBJECTIVE DESCRIPTION OF VARIETY
FINE LEAVED FESCUES
(Festuca spp.)

NAME OF APPLICANT(S)	TEMPORARY DESIGNATION	VARIETY NAME.
Rutgers, The State University of New Jersey	HOE	'Lucy' (BT: 11/19/2007)

ADDRESS *(Street and No. or R.F.D. No., City, State, Zip Code)*
Foran Hall
Plant Biology & Pathology Dept.
59 Dudley Road, New Brunswick, NJ 08901

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PVPO NUMBER 200500141

Place the appropriate number that describes the varietal character of this variety in the boxes below. Use leading zeroes when necessary: (e.g., 0 8 or 0 9). Characteristics described including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticulture Society or any recognized color fan may be used to determine plant colors; designate system used: _____
Describe location of test area, conditions and number of plants used: **See section 16, page 4.**

1. SPECIES: (With comparison varieties for use below - use varieties within species of application variety)

___	1 = *F. rubra ssp. commutata* (Chewings)	11 = Cascade 14 = Banner	12 = Highlight 15 = Barfalla	13 = Jamestown
___	2 = *F. rubra ssp. litoralis* (Creeping Red)	21 = Dawson 24 = Pennlawn	22 = Starlight	23 = Merlin
___	3 = *F. rubra ssp rubra* (Spreading Red)	31 = Boreal 34 = Ensylva		
___	4 = *F. ovina* (Sheep)	41 = Covar		
53	5 = *F. longifolia* (Hard)	51 = Durar	52 = Biljart (C-26)	53 = Scaldis
___	6 = *F. tenuifolia* (Fine-Leaved Sheep)	61 = Panda	62 = Barok	
___	7 = Other *(Specify)* F._____			

2. CYTOLOGY:
4 2 Chromosome Number 3 Ploidy 1 = diploid 2 = tetraploid 3 = hexaploid 4 = octoploid

3. ADAPTATION: (0 = Not Tested; 1 = Not Adapted; 2 = Adapted)
2 Northeast 0 Southeast 0 North Central 2 Pacific N.W. ___ Other *(Specify)* _____

4. MATURITY: Date First Headed (panicle emergence) Location(s) of Trial(s)_____
3 Maturity Class:
1 = Very Early (Covar) 2 = Early (Highlight) 3 = Medium Early (Boreal, Dawson)
4 = Medium Late (Cascade, Ruby) 5 = Late (Jamestown, Agram) 6 = Very Late

Date Headed 36. 00 days after March 1.

___	Days earlier than	___
___	Maturity same as	53
___	Days later than	___

} Comparison Variety

5. Plant Height: (At maturity; to top of panicle; Average of 10 culms)

675.80 mm height

128.00	mm shorter than	53
	Height same as	___

} Comparison Variety

___ mm taller than . . . . . ___

6. GROWTH HABIT: (Mature)
2 1 = Erect (Ruby) 2 = Semi-erect (Highlight) 3 = Prostrate (Silvana)

7. RHIZOMES:
___ mm Length ___ mm Width ___ mm Internode length
1 1 = Absent (Highlight) 2 = Weakly Creeping (Dawson) 3 = Strongly Creeping (Boreal)
4 = Very Strongly Creeping (Fortress)

2005 00 14 1

8. LEAF BLADE:

3 Color: 1 = Light Green (Strarlight) 2 = Medium Light Green (Highlight) 3 = Medium Dark Green (Ruby, Agram) 4 = Dark Green (Jamestown, Manoir) 5 = Bluegreen (Saphir) 6 = Graygreen (Scaldis) 7 = Other (*Specify*) _____

1 Glaucosity (Sowing Year): 1 = Absent (Koket) 2 = Present (Vendrome)

1 Anthocyanin: 1 = Absent 2 = Present 1 Hairs (Basal) 1 = Absent 2 = Present

1 Margins: 1 = Smooth 2 = Semi-rough 3 = Rough

1 Margin folding (closure): 1 = Rolled inward (closed-Highlight) 2 = Flat (open-Jamestown, Engina)

3 Width class: 1 = Very Fine (Agram, Frida) 2 = Fine (Jamestown, Highlight, Banner, Dawson) 3 = Medium Fine (Fortress, Ruby, Scaldis) 4 = Medium Coarse (Engina)

203.30 mm Length (flag leaf)

49.50 mm Shorter than 53

Blade length same as . . . . . |

| mm Longer than . . . . . |

} Comparison Variety

| mm Width (flag leaf)

▲ | mm Narrower than . . . . . |

Blade width same as 53

▲ | mm Wider than . . . . . |

} Comparison Variety

9. LEAF SHEATH:

1 Anthocyanin (seedling): 1 = Absent (Highlight) 2 = Present (Jamestown, Fortress, Marga)

1 Auricle Hairiness: 1 = Absent 2 = Present

1 Margins: 1 = Open (Highlight) 2 = Closed (Jamestown)

10. PANICLE (Mature plant):

1 Shape: 1 = Narrow-tapering 2 = Ovate 3 = Oblong 4 = Other (*Specify*) _____

2 Type: 1 = Open 2 = Intermediate 3 = Compact

1 Orientation: 1 = Erect 2 = Nodding

2 Branch Pubescence: 1 = Glabrous 2 = Pubescent

1 Anther Color:

1 Glume Color (At 50% flowering):

} 1 = Yellowish Green 2 = Green 3 = Bluish Green 4 = Purplish 5 = Reddish 6 = Other (*Specify*) _____

594.30 mm Length

120.50 mm Shorter than 53

Panicle length same as . . . . . |

| mm Longer than . . . . . |

} Comparison Variety

11. PALEA:

2 Hairs (On keels or margins): 1 = Absent (Banner) 2 = (Agram, Scaldis, Olds) Short 3 = Long (Ranier, Fortress, Jamestown)

12. LEMMA (Mature):

2 Hairs: 1 = Absent (Jamestown) 2 = Several 3 = Many (Highlight)

5.18 mm Lemma Length

	mm Shorter than	
	Lemma length same as	53
	mm Longer than	

} Comparison Variety

0.98 mm Lemma Width

	mm Narrower than	53
	Lemma width same as	
	mm Wider than	

} Comparison Variety

2 Awns: 1 = Absent 2 = Present

2.13 mm Awn Length

0.29	mm Shorter than	53
	Awn length same as	
	mm Longer than	

} Comparison Variety

13. SEED (With lemma & palea):

1 Size Class (g/1000 seed):
1 = <.9g (Biljart, Dawson) 2 = .91-< 1.1g (Jamestown, Highlight)
3 = 1.1 - 1.3 g (Fortress, Novorubra) 4 = > 1.3g (Boreal, Golfrood)

1,048.00 mg per 1000 seed

48.00	mg per 1000 seed less than	53
	Seed Weight same as	
	mg per 1000 more than	

} Comparison Variety

14. DISEASE, INSECT, AND NEMATODE REACTION (0 = Not Tested, 1 = Susceptible, 2 = Resistant):

0	Melting-out *Drechslera poae* (*Helminthosporium vagans*)	0	Stripe rust *P. striiformis*
0	Leaf spot *D. siccans*	0	Leaf rust *P. poae-nemoralis*
0	Net blotch *D.* dictyoides	0	*P. crandalli*
0	Leaf spot *Bipolaris sorkiniana*	0	Pythium Blight *Pythium ultimum*
0	Brown patch *Rhizoctonia solani*	0	Red thread *Corticum fusciforme*
0	Powdery Mildew *Erysiphe graminis*	0	Dollar spot *Sclerotinia homoeocarpa*
0	Stripe smut *Ustilago striiformis*	0	Insect _____
0	F. Patch, Pink snow-mold *Fusarium nivale*	0	Nematode _____
0	Fusarium blight *F. tricinctum, F. roseum*	0	Other _____
0	Gray snow mold *Typhula iotana*	0	Other _____
0	Stem rust *Puccinia graminis*	0	Other _____

15. GIVE VARIETY OR VARIETIES THAT MOST CLOSELY RESEMBLE THE APPLICATION VARIETY. For the following characteristics indicate Degree of Resemblance by placing the column marked, D. R., 1 of the following numbers:

1 = Application variety is less than comparison variety. 2 = Same As
3 = More than, better, greater, darker, more disease resistant, etc.

CHARACTER	VARIETY	D. R.	CHARACTER	VARIETY	D.R.
Rhizome Length	Scaldis	2	Growth Habit	Scaldis	3
Leaf Width	Scaldis	2	Leaf Color	Scaldis	2
Panicle Color	Scaldis	1	Panicle Shape	Scaldis	2
Winter Color	Scaldis	2	Cold Injury	Scaldis	2
Shade Tolerance	Scaldis	2	Heat	Scaldis	2
Drought	Scaldis	2	Disease*	Scaldis	2

* *Specify each disease evaluated.*

16. ADDITIONAL DESCRIPTION: (Use additional sheets as required)
Describe all characteristics that cannot be adequately described in the form above in Exhibit D. Comparative varieties should be used as may be appropriate, such as for disease. Append all comparative trial and evaluation data, including measured characters, environmental, and disease test.

A morphological nursery designated 02PVPFOD was established in September 2002, in Albany, Oregon. Experimental design consisted of 3 entries; 4 replications per entry; 20 plants per replication; for a total of 80 plants per entry. Scaldis was used as a standard. Plants were established on 2.5 foot centers with a skip row between replications and between entries.

The nursery received 30 pounds of nitrogen per acre rate following establishment and 50 pounds of nitrogen per acre per year in 2003 and 2004. The fertilizer source was 15 - 15 - 15 and was applied as a split application with ½ applied in the spring and ½ in the autumn. The nursery was sprayed twice each spring, 3 weeks between applications, with Quilt (2oz/acre rate), to prevent stem rust. One pound of Karmex per acre rate was applied during the late summer to prevent emergence of volunteer seedlings.

Data was analyzed using analysis of variance for a randomized complete block design. Means were calculated for each replication and then analyzed for tables 1A, 1B, 2A, and 2B.

Tables 3A, 3B, 4A, 4B, 5A, and 5B data was analyzed using binary data confidence intervals. The confidence intervals are given for the characteristics which expressed significant differences.

Exhibit D:

Additional Description

'Lucy' (BT:11/19/2007)
<HOE>Hard Fescue

'Lucy' (BT:11/19/2007)
<HOE>has improved characteristics over current cultivars, such as Scaldis and AHF116. HOE is a more compact cultivar compared to Scaldis (tables 1A, 1B) with the mature plant height shorter than Scaldis and AHF116. The panicle length of HOE is also reduced compared to Scaldis and AHF116 (tables 1A, 1B). The flag leaf characteristics; length, height, and sheath length are all reduced compared to Scaldis and AHF116 (tables 1A, 1B). HOE has fewer spikelets per panicle compared to Scaldis and AHF116 (tables 2A, 2B, illus. 1).

'Lucy' (BT:11/19/2007)
<HOE>may be differentiated from Scaldis and AHF116 on several visual characteristics. HOE exhibits a lower frequency of plants with pubescence of the panicle branch compared to Scaldis and AHF116 (tables 3A, 3B). The frequency of glabrous leaf sheath surface hairs is less for HOE than Scaldis and AHF116 (tables 4A, 4B). HOE produces more plants with a semi-erect growth habit compared to Scaldis and AHF116 (tables 5A, 5B). The weight of 1,000 seeds of HOE is less than AHF116 and Scaldis (tables 4A, 4B).

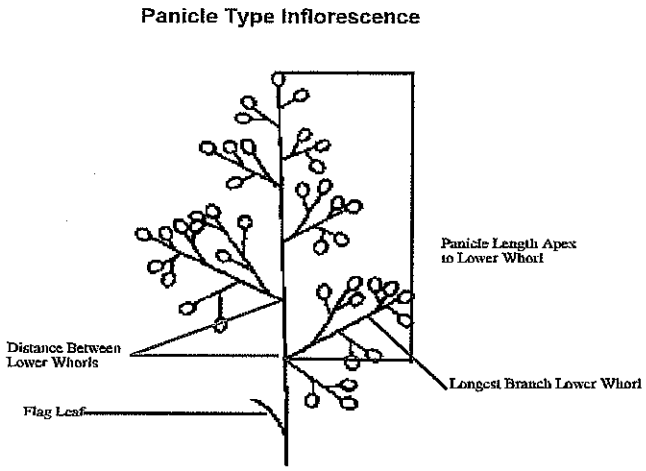

Illustration 1.

Table 1A

2003 Morphological Data

Cultivar	Heading Date days after March 1	Anthesis Date days after March 1	Genetic Color 1-9 Scale 9=best	Mature Plant Height (mm)	Plant Width (mm)	Panicle Length (mm)	Flag Leaf Length (mm)	Flag Leaf Height (mm)	Flag Leaf Sheath Length (mm)	Flag Leaf Internode Length (mm)	Leaf Blade Length (mm)	Leaf Blade Height (mm)	Leaf Sheath Length (mm)
'Lucy' (est 11/9/2005) HOE>	43.75	57.75	5.39	481.80	93.50	419.30	180.50	199.00	125.30	56.00	123.00	123.00	123.00
AHF116	47.25	57.00	5.26	583.50	98.80	503.00	248.80	242.80	167.30	67.30	170.80	94.00	95.30
Scaldis	48.00	57.75	5.23	631.00	100.80	553.50	263.80	268.50	179.00	69.00	180.50	101.00	100.80
LSD 5%	2.94	0.61	0.36	26.00	7.50	28.40	14.90	21.90	13.70	12.00	16.30	8.40	11.20
C.V.	4.62	0.77	4.98	3.35	5.57	4.20	4.69	6.72	6.33	13.58	7.48	6.92	9.21

Table 1B

2004 Morphological Data

Cultivar	Heading Date days after March 1	Anthesis Date days after March 1	Genetic Color 1-9 Scale 9=best	Mature Plant Height (mm)	Plant Width (mm)	Panicle Length (mm)	Flag Leaf Length (mm)	Flag Leaf Height (mm)	Flag Leaf Sheath Length (mm)	Flag Leaf Internode Length (mm)	Leaf Blade Length (mm)	Leaf Blade Height (mm)	Leaf Sheath Length (mm)
HOE	36.00	45.75	5.46	675.80	206.30	594.30	203.30	223.80	141.80	77.00	137.80	69.30	72.30
AHF116	36.25	45.75	5.68	735.30	219.50	644.30	237.00	261.50	163.80	91.50	169.50	83.50	88.80
Scaldis	36.50	45.50	5.56	803.80	212.50	714.80	252.80	264.50	175.50	87.30	170.00	73.50	87.00
LSD 5%	2.01	1.35	0.19	24.00	17.30	24.40	23.90	23.90	13.70	13.10	13.60	14.50	7.40
C.V.	4.03	2.16	2.46	2.36	5.91	2.73	7.52	6.96	6.19	11.22	6.21	14.00	6.54

■ Cultivar under evaluation
■ Significant difference over two years one location.
■ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points

Table 2A

2003 Laboratory Morphological Data

Cultivar 'Lucy'	Lemma Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Glume Length (mm)	Florets per Spikelet	Spikelet Length (mm)	Length of Longest Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Whorl	Spikelets per Panicle	Length of Panicle from Lower Most Whorl to Tip (mm)
(ST:11/19/03) HOE>	5.18	0.98	2.13	4.65	7.50	10.45	51.30	30.93	6.50	27.00	96.30
AHF116	5.35	0.97	1.96	4.82	7.60	10.50	55.10	33.00	8.00	34.75	108.93
Scaldis	5.36	1.04	2.42	4.96	7.95	11.20	56.80	37.40	7.25	31.25	119.60
LSD 5%	0.20	0.03	0.22	0.33	0.79	0.71	3.97	2.48	1.05	2.01	4.61
C.V.	2.79	2.37	7.54	4.97	7.45	4.81	5.31	5.35	10.53	4.72	3.10

Table 2B

2004 Laboratory Morphological Data

Cultivar	Lemma Length (mm)	Lemma Width (mm)	Lemma Awn Length (mm)	Glume Length (mm)	Florets per Spikelet	Spikelet Length (mm)	Length of Longest Whorl (mm)	Distance Between Lower Most Whorls (mm)	Number of Spikelets on the Longest Whorl	Spikelets per Panicle	Length of Panicle from Lower Most Whorl to Tip (mm)
HOE	5.13	0.84	1.67	4.23	5.53	10.13	54.10	36.03	7.00	27.00	109.88
AHF116	5.18	0.87	1.75	4.29	5.18	9.78	53.23	34.75	7.25	30.75	112.18
Scaldis	5.50	0.93	1.99	4.74	6.25	11.08	58.00	40.95	7.00	30.25	127.95
LSD 5%	0.37	0.08	0.21	0.30	0.37	0.44	3.59	3.51	0.40	3.15	8.82
C.V.	5.10	6.71	8.47	4.89	4.73	3.10	4.74	6.85	4.08	7.81	5.50

■ Cultivar under evaluation
■ Significant difference over two years one location.
■ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points

12.

Table 3A

2003 Morphological Measurements of the Panicle

Cultivar	Anther Color % Yellow	Anther Color % Purple	Panicle Color % Red	Glume Color % Purple	Panicle Orientation % Nodding	Panicle Shape % Narrow	Panicle Shape % Ovate	Panicle Shape % Oblong	Panicle Type % Open	Panicle Type % Intermediate	Panicle Type % Compact	Percent Branches of Lower Whorl =1	Percent Branches of Lower Whorl =2	Percent Branches of Lower Whorl =3	Panicle Branch Pubescence		
															% Present	Lower CI	Upper CI
'Lucy' (as: 1/14/04) HOE	10	61	88	65	0	14	39	48	48	39	14	84	16	0	28	0.182	0.378
AHF116	23	59	89	44	0	6	45	49	49	45	6	85	15	0	82	0.736	0.904
Scaldis	23	51	95	53	0	20	41	39	39	41	20	78	23	0	68	0.578	0.782
LSD 0.5																	

Table 3B

2004 Morphological Measurements of the Panicle

Cultivar	Anther Color % Yellow	Anther Color % Purple	Panicle Color % Red	Glume Color % Purple	Panicle Orientation % Nodding	Panicle Shape % Narrow	Panicle Shape % Ovate	Panicle Shape % Oblong	Panicle Type % Open	Panicle Type % Intermediate	Panicle Type % Compact	Percent Branches of Lower Whorl =1	Percent Branches of Lower Whorl =2	Percent Branches of Lower Whorl =3	Panicle Branch Pubescence		
															% Present	Lower CI	Upper CI
HOE	4	81	41	4	0	16	34	50	50	34	16	95	5	0	53	0.421	0.639
AHF116	9	78	41	8	0	10	39	51	51	39	10	81	16	0	79	0.949	1.011
Scaldis	10	70	31	4	0	24	45	31	31	45	24	80	19	1	98	0.701	0.879
LSD 0.5																	

■ Cultivar under evaluation
▩ Significant difference over two years one location.
▩ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
CI= Confidence Interval

Table 4A 2003 Additional Measurements of the Leaf Blade and Seed

Cultivar 'Lucy'	Node Color % Distinct	Lemma Hairs % Absent	Lemma Hairs % Several	Lemma Hairs % Many	Lemma Awn % Present	Palea Hairs % Present	Leaf Blade Margin Hairs % Present	Leaf Sheath Auricle Hairs % Present	Leaf Sheath Surface Hairs			Leaf Sheath Collar Hairs % Glabrous	Leaf Blade Surface Hairs % Present	Seed Weight mg per 1,000 seeds
									% Glabrous	Lower CI	Upper CI			
(EST: 11/9/07) <HOE>	75	0	77	23	100	100	36	0	1	0.000	0.032	100	0	1048
AHF116	75	0	72	28	100	100	48	0	15	0.072	0.228	100	0	1286
Scaldis	81	0	92	8	100	100	31	0	20	0.112	0.288	100	0	1096
LSD 0.5														

Table 4B 2004 Additional Measurements of the Leaf Blade and Seed

Cultivar	Node Color % Distinct	Lemma Hairs % Absent	Lemma Hairs % Several	Lemma Hairs % Many	Lemma Awn % Present	Palea Hairs % Present	Leaf Blade Margin Hairs % Present	Leaf Sheath Auricle Hairs % Present	Leaf Sheath Surface Hairs			Leaf Sheath Collar Hairs % Glabrous	Leaf Blade Surface Hairs % Present	Seed Weight mg per 1,000 seeds
									% Glabrous	Lower CI	Upper CI			
HOE	21	0	72	28	100	100	31	0	5	0.002	0.098	100	0	1051
AHF116	23	0	68	32	100	100	30	0	11	0.041	0.179	100	0	1226
Scaldis	35	0	86	14	100	100	29	0	28	0.182	0.378	100	0	1107
LSD 0.5														

■ Cultivar under evaluation
■ Significant difference over two years one location.
■ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
CI= Confidence Interval

14.

Table 5A 2003 Additional Morphological Measurements

Cultivar 'Lucy' (BT:11/9/07) <HOE>	Growth Habit at Anthesis % Erect	Growth Habit at Anthesis % Semi-Erect	Growth Habit at Anthesis % Prostrate	Leaf Blade Anthocyanin % Purple	Leaf Blade Margin Folding % Closed	Leaf Sheath Margins % Open	Seedling Leaf Sheath Color % Purple	Rhizomes % Present	Spring Growth Habit % Prostrate	Spring Growth Habit % Semi-Erect	Spring Growth Habit % Erect	Rhizomes % Present
AHF116	53	46	1	0	100	100	5	0	84	16	0	0
Scaldis	25	58	18	0	100	100	5	0	67	33	0	0

Table 5B 2004 Additional Morphological Measurements

Cultivar	Growth Habit at Anthesis % Erect	Growth Habit at Anthesis % Semi-Erect	Growth Habit at Anthesis % Prostrate	Leaf Blade Anthocyanin % Purple	Leaf Blade Margin Folding % Closed	Leaf Sheath Margins % Open	Seedling Leaf Sheath Color % Purple	Rhizomes % Present	Spring Growth Habit % Prostrate	Spring Growth Habit % Semi-Erect	Spring Growth Habit % Erect	Rhizomes % Present
HOE	36	48	16	0	100	100	4	0	0	100	0	0
AHF116	74	24	3	0	100	100	8	0	0	100	0	0
Scaldis	45	40	15	0	100	100	5	0	0	100	0	0

■ Cultivar under evaluation
■ Significant difference over two years one location.
■ Significant difference over one year one location.
Measurements taken in Albany, Oregon
4 reps; 20 plants/rep = 80 data points
CI= Confidence Interval

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine is a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)
Rutgers, The State University of New Jersey
(BT: 8/4/2006)

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER
HOE

3. VARIETY NAME
Lucy
(BT: 11/29/2007)

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Foran Hall
Plant Biology & Pathology Dept.
59 Dudley Road
New Brunswick, NJ 08901

5. TELEPHONE *(include area code)*
(732) 932 - 9711 ext. 160

6. FAX *(include area code)*
(732) 932 - 9441

7. PVPO NUMBER 200500141

8. Does the applicant own all rights to the variety? *Mark an "X" in appropriate block.* If no, please explain.
[X] YES [ ] NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company?
If no, give name of country _____
[X] YES [ ] NO

10. Is the applicant the original breeder? If no, please answer the following:
[X] YES [ ] NO

a. If original rights to variety were owned by individual (s):
Is (are) the original breeder(s) a U.S. national(s)? If no give name of country _____
[X] YES [ ] NO

b. If original rights to variety were owned by a company:
Is the original breeder(s) U.S. based company? If no give name of country _____

11. Additional explanation on ownership (*If needed, use reverse for extra space*):

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

Public reporting burden for this collection of information is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter.

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STD-470-E (03-96)

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT F
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S)	ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)*	TEMPORARY OR EXPERIMENTAL DESIGNATION
Rutgers, The State University of New Jersey	Foran Hall Plant Biology & Pathology Dept. 59 Dudley Road New Brunswick, NJ 08901	HOE VARIETY NAME Lucy (BE:11/19/2007)
NAME OF OWNER REPRESENTATIVE (S)	**ADDRESS *(Street and No. or RD No., City, State, and Zip Code and Country)***	**FOR OFFICIAL USE ONLY**
Dr. William Meyer	Foran Hall Plant Biology & Pathology Dept. 59 Dudley Road New Brunswick, NJ 08901	PVPO NUMBER 200500141

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

W C Meyer
Signature

8/22/07
Date